KPMG

Final Report

INTERNAL ISSUES SCAN FOR INDUSTRY CANADA'S SUSTAINABLE DEVELOPMENT STRATEGY (SDS II)

Industry Canada Industrie Canada

Prepared for

Audit and Evaluation Branch
Industry Canada

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EXECUTIVE SUMMARY

Industry Canada commissioned KPMG Consulting LP to undertake an internal issues scan, to identify key sustainable development issues from the standpoint of departmental employees. Related opportunities and constraints that impact on implementing a sustainable development strategy (SDS) were also identified.

The approach taken in this study is a self-assessment based on interviews with 46 professional and management officials from a cross-section of branches within Industry Canada. The identified issues, opportunities and constraints are to a large extent based upon the perceptions of the officials that were interviewed.

KEY SUSTAINABLE DEVELOPMENT ISSUES

Nine sustainable development issues emerged from the consultation process that can be considered to be key issues, from the standpoint of Industry Canada's mandate and its strategic direction. These issues are also consistent with the objectives identified in *A Guide to Green Government* and the recent *Speech from the Throne*. The results of this study reflect the perceptions of the officials that were interviewed.

The issues that the department could further focus upon in the next phase of the sustainable development strategy (SDS II) are:

- efficient use of Canada's renewable resources;
- management of toxic substances;
- pollution prevention and clean-up technologies;
- greenhouse gas emissions and climate change technology;
- distribution of costs and benefits between generations;
- improving productivity;
- integrating sustainable development into decision-making processes;
- putting Industry Canada's own house in order; and
- partnerships for sustainable development.

These issues are linked to each of the five general objectives in the *Guide to Green Government*.

The consultation process involved representative individuals from a cross section of branches within the department. Each branch within the department may prioritize these issues differently. The department will need to review and validate these issues, and prioritize them from an overall departmental standpoint.

OPPORTUNITIES

A number of perceived opportunities for specific initiatives by Industry Canada, to address the above listed issues, were also identified. An "opportunity" is a perceived potential area in which specific Industry Canada initiatives could be further pursued or launched to achieve departmental and/or government-wide sustainable development objectives.

The results of this issues scan suggest that some of the department's strategic objectives are perceived as offering more opportunity to advance sustainable development than do others. The **innovation** and **marketplace** objectives are perceived to be the most significant in the medium term and the **connectedness** objective appears to have a significant potential in the longer term. The **stewardship and management** objective is considered to be necessary to support the initiatives of the strategic objectives.

While the issues identified in the scan are linked to each of the five general sustainable development objectives in the *Guide to Green Government*, the key opportunities appear to be most strongly aligned with two *Guide* objectives: sustaining our natural resources: sustainable jobs, communities and industries; and improving our quality of life and well being.

Specific opportunities, given the department's scope of activities, were perceived as follows:

- Efficient use of Canada's renewable resources
  - opportunity areas: biotechnology; technology roadmaps; e-commerce; sustainable trade.
- Management of toxic substances
  - opportunity areas: promoting and supporting industry action on toxic substances; increasing competitiveness through investment.
- Pollution prevention and clean-up technologies
  - opportunity areas: cleaner production and disposal; eco-efficiency; eco-effectiveness; pollution prevention Web site; best practices and voluntary standards; environmental management systems for SMEs.
- Greenhouse gas emissions and climate change technology
  - opportunity areas: developing and showcasing technology; technology migration strategies; roundtable outreach initiative; information dissemination; trade opportunities.
- Distribution of costs and benefits between generations
  - opportunity areas: no specific opportunities identified, but could be related to other opportunities.

- Improving productivity
  - opportunity areas: R&D program opportunities; productivity through eco-efficiency; linking e-commerce to productivity and sustainable development; environmental solutions database; trade opportunities.
- Integrating sustainable development into decision-making processes
  - opportunity areas: increased use of decision-making tools; enhanced performance measurement process; improving environmental assessment process; increasing sensitivity to equity issues; integrating SD into corporate planning and strategic documents of the department; use of Industry Canada Internet Web site in decision-making process.
- Putting Industry Canada's own house in order
  - opportunity areas: greening of operations; fleet management; building management; procurement practices.
- Partnerships for sustainable development
  - opportunity areas: partnering with other government departments; partnering with industry; trade partnerships.

CONSTRAINTS

Constraints were identified during the consultation process with Industry Canada officials. A "constraint" is a limiting factor that is perceived to have a significant impact on the potential for the department to advance sustainable development initiatives.

The key constraints discussed in this report fall into the following categories:

- awareness and corporate culture;
- leadership and commitment;
- resources;
- partnerships with industry and other government departments;
- performance measurement; and
- planning process.

There is some consensus among those who were interviewed that a first step for addressing these constraints could require that senior management be more visible in its commitment to the SD agenda. A strong commitment by senior management is perceived as necessary for strengthening the credibility of SDS II within the department.

RECOMMENDATIONS

The following recommendations are outlined for Industry Canada to continue to improve the quality and scope of the SD strategy and to turn sustainable development into concrete actions.

- **Focus on the nine SD issues identified in this report:** These issues have been identified by the departmental representatives that were interviewed as key issues that should be addressed by Industry Canada. Focusing on these specific issues will provide a more strategic approach for SDS II, and will enable the department to undertake SD-related initiatives in a more strategically focused and clear way.
- **Consider the opportunities identified:** It is recommended that the department focus on the key opportunities identified and use them to develop concrete sustainable development initiatives that are relevant and consistent with Industry Canada's mandate and sustainable development priorities, and with government-wide SD objectives.
- **Merge results of this *internal* issues scan with other studies:** This *internal* issues scan summarizes key issues and opportunities identified through interviews with 46 professional and management officials from a cross-section of branches within Industry Canada. Views of stakeholders and clients of Industry Canada's programs and policies, particularly those gathered as part of the *external* issues scan study, and views of officials from other government departments, will need to be merged with the results of this study. In addition, the findings and lessons learned that are presented in the mid-term evaluation study of SDS I need to be considered in developing SDS II. These merged results can then be used as a basis for further consultation with stakeholders and other internal departmental officials.
- **Recognize the constraints:** The department should recognize the constraints identified in this report when developing SDS II. Considering these constraints in the planning process for SDS II could help prioritize the initiatives and to serve as a "reality check" on what is potentially achievable within the parameters defined by these constraints.

This report was essentially based on a self-assessment by Industry Canada officials and reflects their perceptions of the relevance of SD-related initiatives to the department. The findings of this study should be seen as only a step in a continuous improvement process towards "getting it right", and for developing the next sustainable development strategy.

1 Introduction

KPMG Consulting LP was commissioned by Industry Canada to undertake a study to identify key sustainable development (SD) issues and related opportunities from a departmental standpoint. *A Guide to Green Government* and the recent *Speech from the Throne* were used as a starting point to identify the issues.

1.1 Context

Sustainable development within the federal government: In 1997, 28 federal government departments and agencies tabled their first sustainable development strategies in the House of Commons. The objective of these strategies was to operationalize sustainable development—to move it from a concept to a practice—by articulating what needed to be done by federal government departments.

Sustainable Development strategies: Sustainable development has been integrated into both the *Department of Industry Act* and the *Auditor General Act*. Industry Canada's next sustainable development strategy (SDS II) must be tabled before the end of the year 2000. SDS II will have to respond to a number of government-wide objectives, including those specified by *A Guide to Green Government* and other related objectives on the quality of our environment that were highlighted in the recent *Speech from the Throne*.

Issues scan: As part of the process towards developing SDS II, Industry Canada commissioned an "internal issues scan". According to the *Guide to Green Government*, such an issues scan is intended to be a self-assessment of the department's policies, programs and operations in terms of their impacts on sustainable development. The internal issues scan is aimed at helping the department and the Commissioner of the Environment and Sustainable Development understand the implications of the department's activities for sustainable development. A separate "external issues scan", also being done by the department, is intended to develop an understanding of the sustainable development issues from the standpoint of Industry Canada's partners, clients and stakeholder groups that are impacted by the department's policies and programs.

1.2 Objectives of this Report

Issues, opportunities and constraints: The objective of this report is to present the results of the internal issues scan. Key sustainable development issues for Industry Canada, as perceived by departmental officials, are presented, and related opportunities to help address these issues are discussed. In addition, internal departmental constraints towards implementing an effective sustainable development strategy are identified.

1.3 Approach

Consultation: The approach used in the internal issues scan involved a series of interviews with 46 management and professional staff members of Industry Canada (see Appendix B for a list of interviewees).

Self-assessment: The results of the interviews represent a self-assessment of the relevant sustainable development issues and related opportunities that the department could initiate, from an appropriate standpoint of departmental strategic directions as described in *Industry Canada: Making a Difference*. The results presented in this report reflect perceptions of the persons interviewed.

Linking government-wide SD objectives to Industry Canada's mandate: *Making a Difference* is Industry Canada's strategic document on priorities for addressing the department's mandate to help make Canadians more productive and competitive in the global, knowledge-based economy. As part of the approach for this study, Chapter 2 of this internal issues scan report discusses the link between government-wide sustainable development objectives and Industry Canada's strategic directions. The objectives of *A Guide to Green Government* are linked to the five strategic areas of Industry Canada – i.e., innovation, connectedness, marketplace, investment and trade. In addition, the issues scan examines the links of sustainable development with the requirements of corporate and management services, which are intended to provide relevant, timely and credible information that supports Industry Canada's decision-making process.

Emerging themes and issues: The approach for the issues scan also involved narrowing down the key issues which Industry Canada could pragmatically help address through its policies, programs and operations. Nine sustainable development issue areas are discussed in this report as key for related departmental initiatives. The *Guide to Green Government* and the *Speech from the Throne* were used as a first step to prompt officials to identify the key issues from the department's standpoint. See Appendix C for the list of potential issues that were used as a prompt during the interviews.

Identifying the opportunities and constraints: An "opportunity" is a potential area in which specific Industry Canada initiatives could be launched to achieve departmental and/or government-wide sustainable development objectives. A "constraint" is a limiting factor that is perceived to have a significant impact on the potential for the department to advance sustainable development initiatives.

Team approach: The approach for synthesizing the views of departmental officials involved a team of four consultants and departmental sustainable development representatives. An iterative process involving brainstorming sessions among the team members was followed by a review of findings with departmental officials. This approach helped to identify key issues and opportunities that potentially could be addressed by the department.

1.4 Limitations

Only an "internal issues scan": This report represents only an *internal* issues scan based on perceptions of Industry Canada officials. Views of stakeholders and clients of Industry Canada's programs and policies, and views of officials from other government departments, will need to be merged with the results of this study. The results of other studies, such as the findings from the mid-term evaluation study and the *external* issues scan, will also need to be reviewed as part of the planning process for SDS II.

Scope of internal consultations: While a representative sample of officials was consulted from several branches in the department (see Appendix B), there may be other potentially interested individuals and groups within the department that were not interviewed.

Methods: The methods used in this study were tailored to a tight time frame and the resources available for exploring the issues, opportunities and constraints. Consequently, a comprehensive review of pertinent documents (notwithstanding the references consulted and listed in Appendix A), and use of other effective consultation methods (e.g., focus group discussions), were not pursued as part of this internal issues scan.

Moving up the learning curve: As characterized by the recent report of the Commissioner of the Environment and Sustainable Development (*Moving up the Learning Curve*, December 1999), the second generation of sustainable development strategies is being built on the lessons learned from the first phase. Officials consulted at Industry Canada consider themselves to be on a learning curve with regard to making sustainable development initiatives work successfully. Because this report is built on the basis of a self-assessment by these officials, it should be seen as only one step in a continuous improvement process towards "getting it right."

2 Linking Government Sustainable Development Objectives with Industry Canada's Strategic Direction

This chapter of the report outlines the key sustainable development objectives of the federal government and Industry Canada's strategic direction. It presents comments on the linkages between the department's strategic objectives and sustainable development. These comments are based on a review of literature (see list of documents in Appendix A), perceptions and information gathered from interviews with departmental managers and professional staff.

2.1 Government Sustainable Development Objectives

The World Commission on Environment and Development (the Brundtland Commission) defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". This definition has been integrated into Canadian federal legislation. The Government of Canada is committed to sustainable development as a way to improve our quality of life and in 1995 developed *A Guide to Green Government* as a framework to guide and assist federal departments in the preparation of their sustainable development strategies.

The *Guide to Green Government* lays out fifteen sustainable development objectives grouped into five major categories: sustaining our natural resources, protecting the health of Canadians and of ecosystems, meeting our international challenges, promoting equity, and improving our quality of life and well-being. These objectives are outlined in Exhibit 1 and, along with issues identified in the 1999 *Speech from the Throne*, serve as a starting point for the identification of sustainable development issues relevant to Industry Canada.

Exhibit 1: *A Guide to Green Government* Sustainable Development Objectives

Sustaining our Natural Resources – Sustainable Jobs, Communities and Industries

Ensuring renewable resources development is sustainable	Many of Canada's resources are renewable, but for resource bases to be sustainable they must have the capacity to regenerate; the integrity of ecosystems on which a resource depends should be respected.
Ensuring efficient use of non-renewable resources	Some resources, such as minerals, oil, gas and coal, are not renewable. Sound policies that encourage efficient extraction and manufacturing processes, or that stimulate recycling and the development of substitutes will contribute to ensuring these resources are used efficiently.

Protecting the Health of Canadians and of Ecosystems

Virtually eliminating anthropogenic, persistent, bioaccumulative, toxic substances	Toxic and anthropogenic (human-made) substances have long-term health and environmental implications, particularly when they accumulate in plant and animal tissues and thus persist in the environment. Canada needs to determine how to manage or phase-out these toxic substances most effectively.
Adopting a pollution prevention approach	Pollutants (atmospheric, chemical, etc.) damage the environment, often in immeasurable ways. More than how to manage the consequences of pollution, the issue in Canada is how to prevent pollution and waste. Furthermore, Canadian pollution standards are sometimes inadequate or not properly enforced.
Protecting represented areas of ecosystems	The protected spaces that house many forms of plant and animal life, and which are important indicators of overall ecosystem health, need to be preserved.
Warning and responding to natural and human disasters	Natural disasters like landslides, tornadoes, forest fires, severe wind and hailstorms, floods and avalanches can have devastating social and economic costs. Human error or accident can also cause disasters, e.g., oil spills, nuclear waste, with devastating effects. Canada needs an effective warning and adaptive response capability to reduce the costs of disasters.

Meeting Our International Challenges

Protecting ozone layer	The depletion of the ozone layer has human health, environmental and economic implications. Canada must continue efforts to phase-out the production and use of ozone depleting substances.
Reducing greenhouse gas emissions and climate change	Current projections indicate that with no further action Canada's emissions in the year 2000 will be 13 percent higher than in 1990. Canada has committed to stabilize greenhouse gas emissions by the year 2000 and to ultimately return emissions to 1990 levels.
Conserving biodiversity	Biodiversity – the variety, richness and complexity of life that exists within nature – is increasingly threatened. Certain species are particularly at risk, raising issues about how best to protect them and their natural environments.

Promoting Equity

Ensuring a fair distribution of costs and benefits between generations	While it is not possible to predict with precision the likely interests of future generations, future generations must benefit from the environment to the same degree as current generations.
Ensuring fair distribution of current costs and benefits of SD (at home).	Canada needs to extend the benefits of the country's economic prosperity and high quality of life to as broad a segment of the population as possible without threatening the integrity of the nation's ecosystems.
Ensuring fair distribution of current costs and benefits of SD (abroad)	Inequitable distribution of wealth between the nations of North and South is a major barrier to achieving sustainable development. Furthermore, an insufficient provision of technical assistance to developing countries is hindering these countries' ability to respect sustainable practices.

Improving our Quality of Life and Well-being

Fostering improved productivity through environmental efficiency	Environmental efficiency is an important dimension of productivity. How can Canada produce more with less – less resource inputs, less waste? In essence, Canada needs an improved understanding of the environmental costs and benefits and environmental inefficiency.
Supporting innovation towards sustainable development	Canada needs policies and programs that help make measurable progress on a range of sustainable development issues, but that also stimulate innovation and competitiveness. Part of the problem is an inadequate government capacity for and commitment to environmental research, and the need to base environmental objectives on sound, risk-based scientific analysis.
Broadening measures of SD progress to include non-monetary dimensions	Canadians need access to information on sustainable development issues in order to assess, predict and respond to sustainable development challenges.

The 1999 *Speech from the Throne* confirmed the objectives listed in Exhibit 1, while also highlighting the following additional sustainable development objectives:

- **Integrating sustainable development into decision-making processes**—Efforts are not always made to integrate sustainable development into decision making, skills building and tool improvement. Canada must place greater emphasis on sustainable development in government decision making. The use of sound scientific analysis and policy tools needs to be integrated into the business planning and decision-making processes of government.
- **Putting the house in order**—The government intends to make itself a model of environmental excellence. It is introducing legislation and stewardship programs that will ensure sustainable development initiatives are followed. If procedures that encourage sustainable development are not implemented and followed, it will be very difficult to promote sustainable development to the country at large.
- **Partnerships for sustainable development**—Partnerships with government, business and other stakeholders are not always used effectively to encourage the innovation of policy instruments that further sustainable development goals.

The issues related to these objectives were included in the interview prompt sheet (see Appendix C), and were discussed during the consultation process for this study.

2.2 Importance of Industry Canada's Strategic Objectives to Sustainable Development

Industry Canada's mandate is to help make Canadians more productive and competitive in the global, knowledge-based economy. The department's policies, programs, and services help create an economy that:

- provides more and better paying jobs for Canadians;
- supports stronger business growth through sustained improvements in productivity; and
- gives consumers, businesses and investors confidence that the marketplace is fair, efficient and competitive.[1]

The five strategic objectives that guide the department's mandate are highlighted in Exhibit 2. The encompassing activities of corporate and management services underlie all five objectives, to provide relevant, timely and credible information that supports Industry Canada's decision-making process and ensures the transparency of the decision-making process of the Government of Canada.

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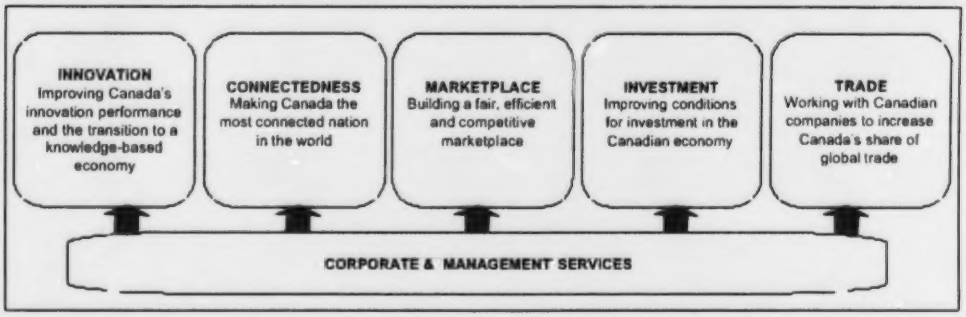
[1] *Making a Difference: Our Priorities for 1999-2000*

Exhibit 2: Strategic Objectives of Industry Canada


INNOVATION
Improving Canada's innovation performance and the transition to a knowledge-based economy
CONNECTEDNESS
Making Canada the most connected nation in the world
MARKETPLACE
Building a fair, efficient and competitive marketplace
INVESTMENT
Improving conditions for investment in the Canadian economy
TRADE
Working with Canadian companies to increase Canada's share of global trade
CORPORATE & MANAGEMENT SERVICES

The following description summarizes, from *Making a Difference*, the priorities of the department for 1999-2000, and also selectively considers the nature of each strategic objective in terms of its linkages to sustainable development, as perceived by the interviewees in this study.

2.2.1 Innovation

Promoting innovation is essential if Canada is to lead in the creation of a knowledge-based economy and improve its productivity and competitiveness. Industry Canada promotes and encourages innovation and research in the private sector. This provides the opportunity for research into new and better ways of sustaining our natural resources, into methods that could help lower emissions and into the development of technology that could reduce reliance on hazardous substances. Innovation can also lead to improved productivity through the development of eco-efficient technologies and practices. Industry Canada has opportunities to promote eco-efficiency as a reinforcing important dimension of productivity.

Industry Canada can help improve the ability of Canadian firms to develop and use innovative technologies and tools that contribute to sustainable development. One of Industry Canada's sustainable development priorities is to work in partnership with industry to develop innovative tools and practices that improve business and environmental performance. Industry Canada is also encouraging the development and diffusion of clean-production and enabling technologies that produce long-term economic and environmental benefits.

Industry Canada supports the expansion of the Canadian knowledge infrastructure. Examples of this support include *The Canadian Biotechnology Strategy* and *Technology Roadmaps*.

- The *Canadian Biotechnology Strategy* is a strategy aimed at enhancing the quality of life of Canadians in terms of health, safety, the environment and social and economic development by positioning Canada as a responsible world leader in biotechnology. Industry Canada is one of several federal partners in this strategy. The strategy can provide the opportunities to use biotechnology to advance sustainable development.
- *Technology Roadmaps (TRMs)* are forecasting tools that help firms in specific industry sectors assess their future technological and product needs, and map out how best to attain them. TRMs have been developed for forest operations in Canada; wood-based panel products; geomatics virtual technology; and Canadian aircraft design, manufacturing, repair and overhaul. Roadmaps can help to identify opportunities within a sector for future sustainable development-related goods and services.

2.2.2 Connectedness

Industry Canada recognizes that for Canada to be successful in today's global, knowledge-based environment, we must be a connected nation. Industry Canada plays a role in helping businesses and consumers connect to the information highway. The department is contributing to the government's goal of making Canada a connected nation through its support to programs such as *SchoolNet*, *CANARIE*, and *Canada's Voluntary Sector Support Program*.

Electronic commerce and the Internet are two key mediums that Industry Canada can promote from a sustainable development perspective to increase Canada's connectedness. Examples of ways Internet connectedness could potentially contribute to sustainable development, as perceived by interviewees, include:

- Internet-based financial transactions that could reduce the volume of paper bills mailed to consumers and the environmental impacts associated with paper production, printing and transportation.
- E-commerce that may help eliminate product waste by enabling producers to manufacture only the quantity they can sell and consumers to order only the quantity they need.
- E-commerce that could improve efficiency over the entire product supply chain, by affording better management of inventories and mass customization.
- The superior quality of on-line information that can reduce the quantity of paper and other products manufactured.

There is a perception that Industry Canada can also help to keep Canadians aware and informed about sustainable development issues so that they can integrate economic, environmental and social considerations into their decisions. The perception is that Industry Canada can promote business and consumer awareness by providing information electronically on clean production and enabling technologies, using tools such as a sustainable development Web site within *Strategis*, the Industry Canada portal to government information databases, and the *Canadian Business Environmental Performance Office (BEPO).*

2.2.3 Marketplace

Industry Canada is committed to building a fair, efficient and competitive marketplace. Examples of some of the activities undertaken by the department to fulfil this commitment include the reduction of the regulatory burden on industry, the streamlining of regulatory requirements in telecommunications and other sectors, and the acquisition of new spectrum allocations at the International Telecommunication Union.

A fair, efficient and competitive marketplace will create wealth and also ensure a fair distribution of the costs and benefits of development between generations, among nations and between the poor and the affluent. Passing on economic growth to future generations through innovation and productivity is key to sustaining development. Industry Canada can help educate the Canadian market on the challenges, opportunities and benefits of advancing sustainable development. Industry Canada also has an opportunity to educate the Canadian marketplace on the importance of factoring in the non-monetary dimensions of progress and prosperity. For example, through the reform of the *Canada Business Corporations Act* Industry Canada can reform corporate law and create a marketplace that promotes and stimulates growth.

There is a general perception that Industry Canada can help create a marketplace climate that encourages companies to invest in innovations that improve their business performance as well as their ability to address environmental challenges.

2.2.4 Investment

Part of Industry Canada's mandate is to encourage domestic and foreign investment in Canada. Industry Canada is improving the conditions that lead to increased business investment in Canada, with the ultimate goal of improved economic growth. Efforts underway include the adoption of competitive, efficient and fair marketplace laws and regulations that improve the investment climate; joint partnerships with DFAIT to attract and retain multinational investment (*Investment Partnerships Canada*); and the identification of opportunities for growth for SMEs and target groups such as Aboriginal people (e.g., *Aboriginal Business Canada* provides a broad range of services to help build the Aboriginal economy).

When promoting Canadian investment opportunities, Industry Canada should be aware of the challenge of extending the benefits of economic prosperity and high quality of life to a broad segment of the population while maintaining the fundamental integrity of our ecosystems. As a result, some of the people interviewed felt that Industry Canada has an opportunity to:

- monitor investment in order to ensure that renewable resources development is sustainable;
- promote policies that encourage efficient manufacturing processes;
- encourage investors to minimize the release of toxic, anthropogenic substances into the environment; and
- promote the importance of pollution and waste prevention.

Industry Canada seeks to encourage investment flows that contribute to sustainable development in Canada. The department is encouraging investment in Canadian knowledge, products, practices and technologies that further the objectives of sustainable development.

2.2.5 Trade

Industry Canada is working with Canadian companies to increase Canada's share of global trade. Examples of this effort include the Industry Canada *International Trade Centres (ITCs)* located across Canada and the department's *Trade Team Canada Sector (TTCS)* teams that are instrumental in the delivery of Canada's trade programs.

Canada's trade performance is a critical factor in sustaining a strong, healthy economy. The view was expressed that trade policies could foster a higher standard of living without increasing pressure on global ecosystems.

There was a perception amongst some of those interviewed that the department can encourage Canadian innovation that furthers the competitiveness of Canadian industry and their access to markets; encourage the export of Canadian innovations that further the objectives of sustainable development; encourage trade that contributes to sustainable development goals in Canada and abroad; promote the establishment of international rules that further the objectives of sustainable development; and encourage Canadian industry in the domestic and global marketplace.

2.2.6 Corporate and Management Services

Although not considered one of the department's five strategic objectives, corporate and management services are a critical supportive component of the overall departmental strategic directions. Strong corporate management strengthens the department's decision-making process and increases the capacity of the department to manage and deliver its programs, policies and operations that support sustainable development.

There was a feeling that Industry Canada can continue to improve the stewardship capacity of the department to support sustainable development through internal continuous improvement mechanisms, such as greening operations and through the integration of sustainable development into corporate decision making (e.g. the further development of an environmental management system for internal operations).

2.3 Industry Canada and Sustainable Development Can Be Compatible

Industry Canada's mandate can be quite compatible with the goals of sustainable development. Sustainable development is not just the protection of the environment. It includes the efficient and environmentally responsible use of all of our scarce resources—natural, human and economic. The sustainable development equation includes the social, economic and environmental areas that lead to an improved quality of life and well being. Environmental protection need not be viewed as a barrier to economic development. Rather, a healthy economy stimulates job growth and wealth necessary to foster research and development and to make investments necessary to ensure a healthy environment. Consequently, Industry Canada and sustainable development can be compatible.

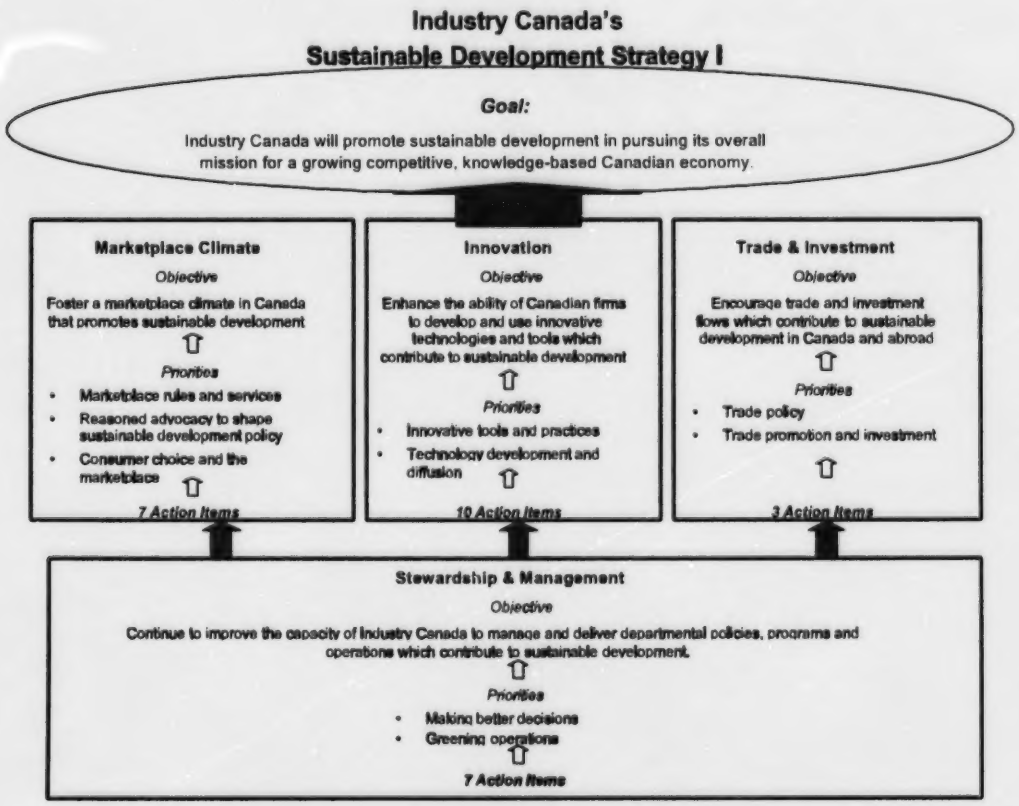
3 Key Issues and Opportunities

This section presents the key sustainable development issues and opportunities that are perceived to be relevant to Industry Canada for the next sustainable development strategy.

3.1 Context and Linkages for Issues Scan

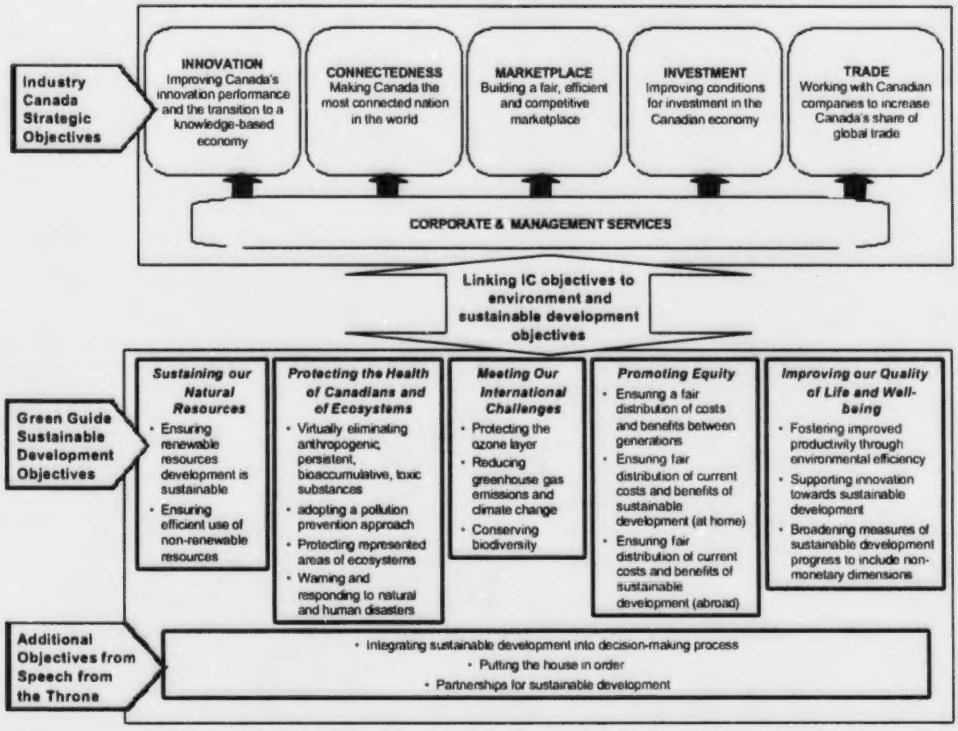
Industry Canada's first sustainable development strategy is depicted graphically in Exhibit 3. The strategy outlines 27 action items that address nine priority areas under four objectives: Marketplace Climate, Innovation, Trade and Investment, and Stewardship and Corporate Management. A 28th action item was added in 1998 under the Marketplace Climate objective, involving United Nations consumer protection guidelines. This additional action item is not factored into Exhibit 3.

Exhibit 3: Existing SDS I


Industry Canada's
Sustainable Development Strategy I
Goal:
Industry Canada will promote sustainable development in pursuing its overall mission for a growing competitive, knowledge-based Canadian economy.
Marketplace Climate
Objective
Foster a marketplace climate in Canada that promotes sustainable development
Priorities
Marketplace rules and services
Reasoned advocacy to shape sustainable development policy
Consumer choice and the marketplace
7 Action Items
Innovation
Objective
Enhance the ability of Canadian firms to develop and use innovative technologies and tools which contribute to sustainable development
Priorities
Innovative tools and practices
Technology development and diffusion
10 Action Items
Trade & Investment
Objective
Encourage trade and investment flows which contribute to sustainable development in Canada and abroad
Priorities
Trade policy
Trade promotion and investment
3 Action Items
Stewardship & Management
Objective
Continue to improve the capacity of Industry Canada to manage and deliver departmental policies, programs and operations which contribute to sustainable development.
Priorities
Making better decisions
Greening operations
7 Action Items

The context in which SDS II will be developed is presented in Exhibit 4. Industry Canada's five strategic objectives, as described in the Industry Canada document *Making a Difference – Our Priorities for 1999-2000* are linked to the fifteen sustainable development objectives from the *Guide to Green Government* and the three objectives summarized from the 1999 *Speech from the Throne.*

Exhibit 4: Current Context for SDS II Issues Scan


Industry Canada Strategic Objectives
INNOVATION
Improving Canada's innovation performance and the transition to a knowledge-based economy
CONNECTEDNESS
Making Canada the most connected nation in the world
MARKETPLACE
Building a fair, efficient and competitive marketplace
INVESTMENT
Improving conditions for investment in the Canadian economy
TRADE
Working with Canadian companies to increase Canada's share of global trade
CORPORATE & MANAGEMENT SERVICES
Linking IC objectives to environment and sustainable development objectives
Green Guide Sustainable Development Objectives
Sustaining our Natural Resources
• Ensuring renewable resources development is sustainable
• Ensuring efficient use of non-renewable resources
Protecting the Health of Canadians and of Ecosystems
• Virtually eliminating anthropogenic, persistent, bioaccumulative, toxic substances
• adopting a pollution prevention approach
• Protecting represented areas of ecosystems
• Warning and responding to natural and human disasters
Meeting Our International Challenges
• Protecting the ozone layer
• Reducing greenhouse gas emissions and climate change
• Conserving biodiversity
Promoting Equity
• Ensuring a fair distribution of costs and benefits between generations
• Ensuring fair distribution of current costs and benefits of sustainable development (at home)
• Ensuring fair distribution of current costs and benefits of sustainable development (abroad)
Improving our Quality of Life and Well-being
• Fostering improved productivity through environmental efficiency
• Supporting innovation towards sustainable development
• Broadening measures of sustainable development progress to include non-monetary dimensions
Additional Objectives from Speech from the Throne
• Integrating sustainable development into decision-making process
• Putting the house in order
• Partnerships for sustainable development

The linkages between Industry Canada's strategic objectives (including the corporate and management services objective) and each of the eighteen sustainable development objectives were assessed through the issues scan consultation process with management and professional staff within the department, and by a review of the key directives put forth in the *Guide to Green Government* and the *Speech from the Throne.*

Several key issues emerged from these interviews and it was possible to link these issues with the major strategic objectives of the department. Logical linkages were made between Industry Canada's strategic objectives and nine sustainable development issues. These issues and opportunities are discussed in more detail later in this chapter of the report.

3.2 Logic Diagram

The logic diagram provided in Exhibit 5 lists the key sustainable development issues that emerged from the interview process as important for Industry Canada. The logical linkages between the key sustainable development issues, the strategic objectives of the department, and the opportunities identified, are depicted in the logic diagram.

The key issues and opportunities that are identified in Exhibit 5 are discussed in the following sections. These issues and opportunities are summarized results based on the perceptions of management and professional staff of Industry Canada. As discussed in Chapter 1 of this report, the scope of the project and time frame limited our interviews to a sample of officials within the department. While interviewees represented a good cross section of staff throughout the department, and were the departmental officials thought to be most knowledgeable on the subject of sustainable development, not all potentially interested parties and branches within the department were interviewed. Furthermore, the small sample size of 46 interviewees does not lend itself to report on the proportion of staff who commented on each issue. Key issues were selected as ones that were reiterated in a number of interviews or brought to the table by individuals with significant knowledge and understanding of sustainable development.

3.3 Efficient Use of Canada's Renewable Resources

Many of Canada's resources are renewable (e.g., forests, water), but for resource bases to be sustainable they must have the capacity to regenerate. Sound environmental practices are essential in order to support a strong natural resources sector. Renewable resources should be managed on an integrated basis that recognizes the full range of their uses and values.[1]

Our consultation with departmental managers and professionals concluded that the development of new technology from the manufacturing sector holds promise for the introduction of more sustainable and less resource intensive production and extraction methods in the resource sector —an innovation concept. Interviewees also confirmed that there could be opportunities within two other Industry Canada strategic objectives—connectedness and trade—to make efficient use of Canada's renewable resources.

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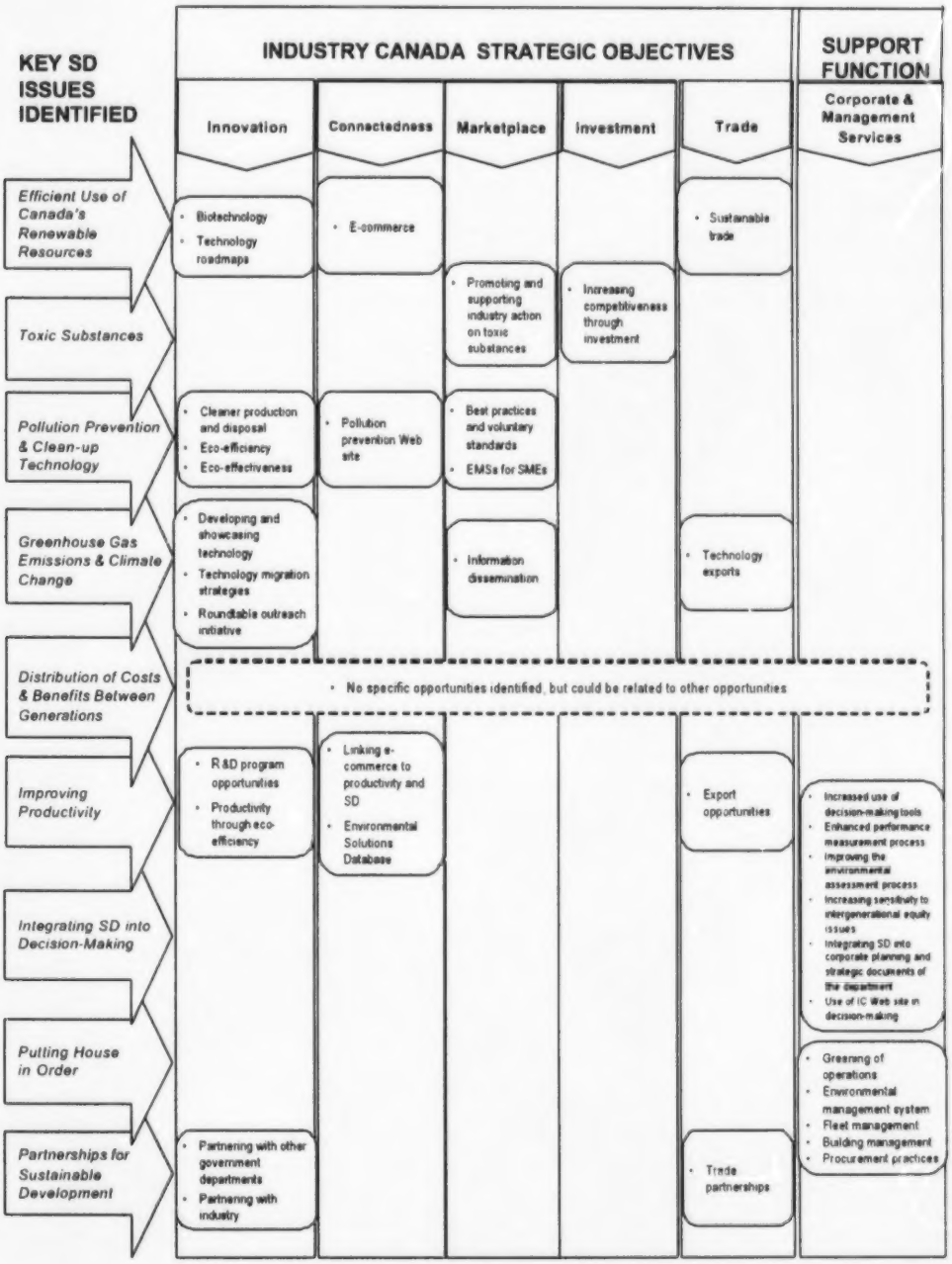
[1] *A Guide to Green Government, 1995.*

Exhibit 5: Logic Chart Linking SD Issues/Objectives to Industry Canada's Strategic Areas and Key SD Opportunities



As Canada becomes more connected and electronically oriented, there is an expectation that the new economy will be less dependent on certain resources. The resource sector must still remain viable, and in order for it to do so it needs to operate in a fair marketplace with the maximum number of commercial opportunities. Specific opportunities identified in the interviews to address this issue are highlighted below.

3.3.1 Innovation

Biotechnology: As the Canadian biotechnology sector develops, biotechnology is creating opportunities for resource and other sectors to combine competitiveness with sustainable practices. For example, plantations of genetically improved trees will increase fiber availability and reduce wood costs, thus strengthening the forest sector's competitiveness. Likewise, the use of chemical feedstock will reduce the amount of Canadian landmass used, contributing to a regeneration of natural, renewable resources. Biotechnology opportunities are ongoing. The key is to support biotechnology initiatives that aim to develop less resource intensive products and methods.

Technology Roadmaps: Another issue facing resource intensive industries is a need to identify the technology required to succeed in the long run. Industry Canada's *Technology Roadmap* initiative aims to help industry identify new critical technologies, skills and competencies required to meet future market demands. While roadmaps focused on wood-based panel board and forestry are in progress, opportunities exist for Industry Canada to provide roadmaps in other sectors, and to capitalize on this tool's potential to identify more sustainable production methods in the long run.

3.3.2 Connectedness

E-commerce: There is a perceived over-reliance on paper products and hence on the use of forest products in Canada. By taking a lead in promoting the *Canadian Electronic Commerce Strategy*, Industry Canada is helping to build the infrastructure necessary to support e-commerce. The creation of this infrastructure is creating opportunities for Industry Canada to marry e-commerce with sustainable development. More specifically, it is expected that as businesses become more electronically oriented they will become less reliant on paper-based products.

3.3.3 Trade

Sustainable trade: The forest products industry is one of Canada's major trade sectors and access to foreign markets is a high priority for companies in this sector. In order for this and other trade-reliant sectors to remain internationally competitive, they should not be hindered or impeded by differences between foreign countries' sustainable development standards and regulations. In promoting Canadian industries, Industry Canada could play an active role in international regulation and standardization with respect to sustainable practices. The department also has an opportunity to promote abroad the sustainable practices in place in specific Canadian industries (e.g., showcasing specific companies that are committed to the use of forest products that adhere to sustainable standards and regulations; facilitating trade on sustainable cities).

3.4 Management of Toxic Substances

Toxic and anthropogenic (human-made) substances have long-term health and environmental implications, particularly when they accumulate in plant and animal tissues and thus persist in the environment. The challenge for Canada is to determine how to manage these toxic substances most effectively.[1]

Interviewees confirmed that the management of toxic substances by industry should be sensitive to the public interest, while preserving companies' competitive position. Industry needs to decide how to manage and reduce such substances while ensuring a fair and efficient marketplace (marketplace objective) and while remaining competitive enough to attract investment (investment objective). There should be a balance between the cost of reducing toxic substances and the goal of remaining viable and competitive.

Specific opportunities identified in the interviews to address this issue within the department's marketplace and investment objectives are highlighted below.

3.4.1 Marketplace

Promoting and supporting industry actions on toxic substances: The total elimination of toxic substances in manufacturing is not feasible in the short term. Instead, there is a need to look at which toxic chemicals are being used in manufacturing and establishing what levels of these substances can be safely released. Through the *Toxic Substances Management Policy*, Industry Canada has an opportunity to ensure that toxins are managed in such a way to balance environmental and economic needs. The department also has an opportunity to facilitate Memorandums of Understanding (MOUs) with industry in order to convince industry that better management of substances is in industry's best interest. The department could help guide industry to think proactively on the subject of toxic substances.

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[1] *A Guide to Green Government, 1995.*

3.4.2 Investment

Increasing competitiveness through investment: The environmental urgency to reduce or eliminate toxic substances often makes it challenging for specific industries, such as the chemical industry, to remain viable and competitive. While these industries have a responsibility to manage and prevent toxic substances, making changes is a long-term process. These industries are an important part of the Canadian economy and must survive through this process. If the competitiveness of these industries is reduced, the investment necessary for their survival becomes harder and harder to attract. Industry Canada could ensure that continued investment in the chemical industry is maintained while remaining within the framework of government's sustainable development objectives.

3.5 Pollution Prevention and Clean-up Technologies

Pollutants damage the environment, often in immeasurable ways. Canada needs not only to manage the consequences of pollution, but also to prevent pollution and waste. Pollution prevention involves the use of processes, practices, materials or energy that avoid or minimize the creation of pollutants and waste and reduce overall risk to human health or the environment.[1]

Our consultation with departmental managers and professionals suggests that in the long term, one key to pollution prevention is the innovation of clean-up technologies. Other opportunities exist in advancing eco-efficiency and eco-effectiveness. In the short term, there are opportunities to promote awareness of pollution prevention, through Industry Canada's connectedness and marketplace objectives.

3.5.1 Innovation

Cleaner production and disposal: The continuing innovation of environmental clean-up technologies is essential if industry is going to become more environmentally friendly. Industry Canada has an opportunity to encourage the development of technology necessary for industry to become both more environmentally and economically efficient. Likewise, Industry Canada's *Environmental Programming* program, because it deals with disposing construction site waste, holds opportunities to find improved and more efficient disposal methods and process controls. Industry Canada could also address the issue through the *Canada-Ontario Infrastructure Works (COIW)* program. Another perceived opportunity to develop pollution prevention technology involves the automotive industry. The automotive sector has developed the technology to use cleaner fuel in its vehicles. Opportunities could exist for Industry Canada to work with the automotive and fuel industries to examine the potential of this technology.

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[1] *A Guide to Green Government, 1995.*

Eco-efficiency: Eco-efficiency, doing more with less, is seen by many industries as good business sense. More and more companies are realizing that it is costly to keep polluting. When eco-efficiency is incorporated into corporate decision making, it can prove to be an effective way to reduce costs and risks while remaining profitable. For example, the Canadian forestry industry has made great strides in becoming eco-efficient. A major research program is underway to design and implement closed-water, rather than end-of-pipe, processing systems. Paper mills are already reusing much of their water, but they are looking to recycle all material used in the manufacturing process. Opportunities exist for Industry Canada to encourage other sectors to embrace and invest in eco-efficiency as a means to introduce clean-up technologies and prevent pollution.

Eco-effectiveness: Opportunities may exist for Industry Canada to explore eco-effectiveness. Eco-effectiveness means that production and consumption processes are interdependent with living systems. Through simulation and modeling, businesses are increasingly using information and communications technology (ITC) to design and produce regenerative products that significantly reduce or eliminate waste. Industry Canada can play a role in creating an environment that stimulates the innovation of ITC that can in turn describe opportunities for the development of wasteless production and consumption cycles.

3.5.2 Connectedness

Pollution prevention Web site: The pollution prevention agenda includes increasing industry awareness of harmful effects of pollution and providing industry with information on how to address the issue. Industry Canada could create a pollution prevention Web site on *Strategis* (perhaps modeled on the successful *Canadian Business Environmental Performance Office*). The site could promote awareness information with the goal of integrating clean technologies into corporate planning and practices.

3.5.3 Marketplace

Best practices and voluntary standards: For Canada to make real advances in pollution prevention, the country needs clearer standards on voluntary pollution prevention. While in some instances it may be appropriate for Industry Canada to attempt to influence government policy with respect to pollution levels, in general the department's opportunities to address the issue are in promoting voluntary approaches. Industry is not always aware of the available means to or advantages of pollution prevention, giving Industry Canada opportunities to:

- provide industry with information on best practices;
- highlight industries/companies (e.g., forestry sector, BMW) whose pollution standards exceed industry norms;
- target sectors that have made little progress on reducing pollutants.

Environmental Management Systems for SMEs: Existing voluntary environmental management standards, like the ISO 14000 series, do not completely address the breadth of pollution issues facing Canadian companies, particularly as they apply to small and medium-sized enterprises (SMEs). Further opportunities exist for Industry Canada to work with the private sector to develop an *Environmental Management System* that adopts eco-efficiency principles that reduce waste and maximize resource use, and that are practical and realistic for SME adoption.

3.6 Greenhouse Gas Emissions and Climate Change Technology

Climate change is currently a governmental and a departmental priority. Actions are underway federally and in all provinces to limit greenhouse gas emissions. Federal departments are helping respond to the challenge of reducing emissions standards to 6% below 1990 levels, to meet the Kyoto protocol.[1]

Consultations with departmental managers and professionals concluded that the opportunities for Industry Canada to address climate change fall mainly within the department's innovation objective. The perception is that the challenge of reducing emissions can effectively be met by developing clean-production technologies. There are also opportunities to promote climate-change technologies in the marketplace.

3.6.1 Innovation

Developing and showcasing technology: A key prong in Industry Canada's climate change strategy is the development of enabling technologies (e.g. through TPC). Opportunities exist for the department to espouse the benefits of some of these initiatives. Industry Canada could keep industry informed on what technologies exist and how industry can espouse the potential benefit from the use of such technology to meet climate change targets.

Through *Technology Early Action Measures (TEAM)*, a partnership with Environment Canada and Natural Resources Canada, Industry Canada is developing and showcasing Canadian climate-change technologies. The program is providing Industry Canada opportunities to encourage innovation in technology in certain industry sectors so that the sectors will better be able to meet emission goals.

Technology migration strategies: Part of the challenge in addressing climate change is helping individual firms develop workable technology migration strategies to deal with climate change. By supporting and continuing to be involved in joint industry/government working groups, Industry Canada has an opportunity to work with the private sector to adopt new technologies and practices.

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[1] *A Guide to Green Government, 1995.*

Roundtable outreach initiative: Private sector companies are not always aware of the importance of the climate change issue—there is often a lack of understanding of what can be done to address the issue. The *National Climate Change Process*, an issues roundtable in partnership with industry, is providing an opportunity for Industry Canada to reach out more broadly to industry and to involve a greater number of people in the climate change challenge.

3.6.2 Marketplace

Information dissemination: A large percentage of Canadian firms are SMEs who tend to focus on surviving in the short term. Most do not have in-house resources available for environmental functions, nor do they have the resources to take advantage of international standards of compliance. As a result, it may be difficult for many Canadian companies to meet climate change targets. Industry Canada has already identified ways to provide SMEs with relevant climate change information. Further opportunities exist for Industry Canada to:

- extend the reach of climate change information fairs, so that a larger percentage of SMEs benefit from the information made available at these events; and
- broaden the range of SME-related climate change information included on *Strategis* and other Industry Canada Web sites (e.g. *BEPO*).

3.6.3 Trade

Technology: Industry Canada could potentially further the climate change objective by participating in emissions trading and by providing information, forums and government to government agreements to help make Canadian technologies available for solving climate change challenges in other countries.

3.7 Distribution of Costs and Benefits between Generations

The question of inter-generational equity is a key aspect of sustainable development. Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[1] It is important that future generations are able to *benefit* environmentally, economically, and socially in the same way as the current generation. It is equally important that the *costs* of sustainable development are fairly distributed between generations. The World Commission on Environment and Development further defines sustainable development as "a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs." The notion of inter-generational equity in this sense is an all-encompassing issue for sustainable development, which is very relevant to the strategic direction of Industry Canada – especially given the department's commitment to economic growth through technological innovation and connectedness, an improved investment climate, and a fair and efficient marketplace.

The consultation process for the internal issues scan did not reveal any direct opportunities related to the distribution of costs and benefits between generations. Nonetheless, this issue is perceived as significant for Industry Canada and for Canada as a whole. Since this issue is one that underlies other SD issues, and relates to many of the department's sustainable development activities, it could potentially be addressed through the other opportunities discussed in this report.

3.8 Improving Productivity

The government's *Jobs and Growth Agenda* and Industry Canada's economic growth strategy[2] emphasize the importance of improving productivity. It is the key to providing Canadians with more job opportunities and greater incomes. Productivity in this context means the efficiency with which people, capital, resources and ideas are combined. Environmental efficiency is an important dimension of productivity. If Canadian companies can produce more with less, they will ultimately be more productive. Many environmental improvements, including better energy and water efficiency, waste minimization and pollution prevention are achieved by, or result in, the reduction of inputs, which translates into a reduction of costs.[3]

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[1] *A Guide To Green Government, 1995.*

[2] *Making a Difference: Our Priorities for 1999-2000.*

[3] *A Guide to Green Government, 1995.*

Consultation with management and professional staff within Industry Canada confirmed that the issue of improving productivity from a sustainable development perspective is perceived to be directly related to four of Industry Canada's five strategic objectives. Innovative technology and a more electronically oriented economy both can help increase productivity while improving environmental performance. A more harmonized marketplace should increase the availability of foreign developed technology, which should, potentially, provide opportunities for Canadian firms to be more competitive and productive.

3.8.1 Innovation

R&D program opportunities: The negative effects environmental inefficiency can have on productivity is an issue that holds a number of opportunities for Industry Canada. In general, as industry adopts more environmentally efficient practices its productivity increases. Industry Canada is already promoting innovation in technology through initiatives like the *Networks of Centres of Excellence Program* and *Technology Roadmaps*. Opportunities exist to improve or extend the reach of these initiatives to ensure that sustainable development problems are identified and understood and that clean-production and other forward-looking technologies are developed that make industry at large (not just certain industry sectors) more efficient and productive.

Productivity through eco-efficiency: As pointed out earlier, eco-efficiency is perceived as a way to do more with less. Eco-efficiency can be achieved through such means as reducing energy and material inputs, increasing recyclability and reducing toxic dispersion. It offers the potential to save costs, to reduce risks and to improve business expansion. Industry Canada can play a role in advancing eco-efficient technologies and practices. For example, it is not always clear to industry how the adoption of more efficient environmental practices will make it more productive or competitive. The opportunity exists for Industry Canada to increase industry awareness of the benefits of becoming more eco-efficient.

3.8.2 Connectedness

Linking e-commerce to productivity and sustainable development: Through its connectedness objective, Industry Canada is encouraging ubiquitous usage and adoption of the Internet for business transactions. The connectedness objective of the department is intended to contribute to greater productivity by creating more efficient information exchanges and by more efficient organization of production supply chains. This in turn, as reasoned by Industry Canada officials consulted, could contribute to the sustainable development objectives of government. There is an opportunity for Industry Canada to further clarify the links between e-commerce, productivity and sustainable development.

Environmental solutions database: Opportunities to promote productivity through connectedness also exist with Industry Canada's *Canadian Environmental Solutions* (CES) database. The database is a tool that allows private industry, governments, academics and consultants to research the environmental capabilities of companies registered in the database. It also addresses industry sector problems related to water, soil, R&D and energy; and solves environmental problems encountered. An opportunity exists for Industry Canada to extend the reach of the CES database so that it includes more companies and industry sectors. The department could also increase industry awareness of the database and promote the advantages of using it.

3.8.3 Trade

Export opportunities: There is a perception that if Canada becomes a leader in developing environmentally friendly technologies, there will be trade opportunities for these technologies. Industry Canada already has programs in place (e.g., the *Globe 2000 Program*) that support the advancement and promotion of Canadian technology. Opportunities exist for Industry Canada to follow up such programs with further initiatives. For example, Industry Canada could:

- help organize a Team Canada Mission aimed at promoting Canada's environmental technologies and best practices;
- extend the *Canadian Environmental Solutions* database to other countries to further promote Canadian technologies; and
- facilitate trade through initiatives such as the one being proposed on "sustainable cities".

3.9 Integrating Sustainable Development Into Decision-Making Processes

Integrating sustainable development into decision-making processes of federal government departments is an important area for the SD government-wide initiative. The use of sound scientific analysis and policy tools that reflect SD requirements needs to be integrated into business and strategic planning functions of government.[1]

Departmental interviews revealed that there is a strong perception that Industry Canada has not fully integrated sustainable development into its decision-making processes. The department needs to find new and effective ways to improve the profile of sustainable development so that it is better integrated into management's decision making at all levels.

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[1] *1999 Speech from the Throne.*

3.9.1 Corporate and Management Services

Increased use of decision-making tools: While there have been several good examples of useful tools to increase awareness and help managers with sustainable development decision making—such as training sessions on SD issues and internal articles that describe SD projects and challenges—there is a perception that Industry Canada could improve in this area. There is a feeling that the knowledge and experience within the department on sustainable development could be improved (e.g. on how to deliver on SD targets). There are opportunities to introduce specific tools to assist staff (e.g. life-cycle analysis, user-friendly guidelines for environmental assessments, and performance measurement tools). Furthermore, SD training could be continued and provided on a sustained basis to all interested and involved staff. An internal awareness strategy could also be used to more aggressively promote sustainable development.

Enhanced performance measurement process: Industry Canada has begun to develop a performance measurement process for sustainable development, yet this work is still in its beginning stages. The department has developed a draft Evaluation Framework. Performance indicators have been selectively integrated into SDS I and its reporting mechanisms. While there is an opportunity for Industry Canada to continue to build on and improve the performance measurement process, staff is requesting clarity and guidance on how to proceed with performance measurement. As SD performance measurement is a relatively recent topic for many federal departments, the Commissioner of the Environment and Sustainable Development and the Treasury Board could provide more assistance to guide departments in this process. There is also an opportunity to form an interdepartmental working group that could jointly develop a generic performance measurement process. (This process could then be adapted to the nuances of particular departments). This joint effort would benefit from shared strengths among departments and efficiencies.

Improving the environmental assessment process: The Environmental Assessment Act establishes a process to assess the potential environmental effects of a department's proposed policies, plans and programs. It ensures that the environmental effects of projects are considered as early as possible in a project's planning stages. Sustainable development is established as a fundamental objective of the federal environmental assessment process. While the Canadian Environmental Assessment Agency (CEAA) administers the environmental assessment process and promotes sound assessment policies and practices (e.g. it has published guides and directives for those performing assessments[1]) there is an opportunity for Industry Canada to continue improving these guidelines and the approach that has been pilot tested. Industry Canada could encourage a process to have its departmental guidelines updated and presented more effectively for departmental staff. Those who perform the assessments could be made more aware of the available options and methodologies to perform assessments that best fit their needs and means and, most appropriately, perform necessary assessments.

Increasing sensitivity to intergenerational equity issues: Opportunities could exist for Industry Canada to further develop a decision making process within the department that recognizes the needs of future generations of Canadians. Intergenerational equity is a sustainable development issue that touches on many others. By including it as an underlying rationale for SD related processes, Industry Canada can help ensure that the issue is given a degree of prominence – for what is decided in the short term invariably has long-term impacts. Essentially, if Industry Canada embraces the challenge of integrating equity into the department's strategic mindset and recognizes the issue as an underlying strategic need in itself, it will have an opportunity to make the Canadian marketplace (both public and private sectors) more sensitive to the needs of future generations.

Integrating SD into corporate planning and strategic documents of the department: While sustainable development is referenced in documents such as *Making a Difference*, the SDS I document and related initiatives tend to be perceived by those interviewed for this study as a "stand-alone", adjunct program to the mainstream business of the department. More explicit integration of sustainable development into corporate planning and strategic documents would make the SD initiative more prominent as a priority item for the department.

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[1] *Strategic Enviornmental Assessment: Guidelines for Implementing the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*, Canadian Environmental Assessment Agency.

Use of Industry Canada Internet Web site in decision making process: There are currently several different Web sites where information on Industry Canada's sustainable development activities is accessible to the public. For example, Industry Canada's *Sustainable Development Web site* on *Strategis*, includes a copy of SDS I, the department's latest Performance Report to parliament, and links to some key departmental activities (e.g. BEPO, CES), as well as other Canadian and international sustainable development initiatives. The electronic *Business Environmental Performance Office (BEPO)* also provides clients access to a directory of appropriate "officers" knowledgeable on many environmental topics. These offices include staff at Industry Canada as well as the other federal department partners of BEPO. The *Canadian Environmental Industry Virtual Office* — a public-private sector partnership composed of Industry Canada, EC, CIDA and other representatives from industry, academia and associations — provides users complete access to many of the partners' products and services. This Web site links to Industry Canada's Environmental Affairs page on *Strategis* that provides information on environmental industry and policy development, as well as further links to BEPO and Canadian Environmental Solutions (CES). There are perceived opportunities for:

- Industry Canada management and the private sector to use these Web sites befittingly to make improved and informed decisions. Regular and easy access to the information in these Web sites can help to better integrate sustainable development into the decision making process.
- Industry Canada to consolidate the SD online information and to develop a more comprehensive one-stop portal for SD initiatives as seen from Industry Canada's standpoint, namely as sustainable development relates to the department's mandate and strategic direction.

3.10 Putting Own House in Order

The government wants to make itself a model of environmental excellence and as such, is introducing legislation and stewardship programs that will ensure sustainable development initiatives are followed. If procedures that encourage sustainable development are not implemented and followed by the government, it will be very difficult to promote sustainable development to the country at large.[1]

Interviews with staff confirmed that if Industry Canada is to promote the value and impact of departmental sustainable development related initiatives in a credible manner, effective internal procedures are necessary. There are many opportunities for the department to improve its capacity to manage and deliver sustainable procedures, particularly those that set an example for industry.

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[1] *1999 Speech from the Throne.*

3.10.1 Corporate and Management Services

Greening of operations: The department's *Greening of Operations* initiative is a step in the right direction towards reducing the use of energy and materials. Opportunities exist to more actively promote inter-departmental awareness of the initiative—there is a perception that many Industry Canada employees are not aware that it is underway. There are also opportunities for Industry Canada to learn from other departments who have perceived "best practices" in greening areas.

The department's recycling program is included in the greening initiative. Industry Canada promotes recycling (e.g., paper, aluminum, polystyrene), and is perceived as a leader within government circles. Nevertheless, there may be opportunities to explore continued efficiencies in the program.

Environmental Management System: An opportunity also exists for IC to further develop an Environmental Management System (EMS) for internal operations. Such an EMS could potentially fit into the department's overall business planning system, and could address a variety of issues such as policies, objectives and targets, roles and responsibilities, training and awareness, and performance measurement.

Fleet management: Industry Canada has a fleet of approximately 600 cars. There is a perception within the department that the fleet does not meet the highest, required fuel efficiency standards. Consequently, there could be an opportunity to explore the use of a fleet with more fuel-efficient models.

Building management: Public Works and Government Services Canada (PWGSC) owns the buildings that house the majority of Industry Canada's offices. As a result, Industry Canada has limited control over the actual office environment. Nevertheless, opportunities exist to foster good relationships with PWGSC to increase the likelihood of positively influencing the environmental choices that this department makes.

Procurement practices: Industry Canada is currently not actively seeking out or targeting environmentally friendly suppliers, but rather those who have the lowest costs and the best quality for the jobs required. Yet, good and reliable suppliers are often those who follow best practices and understand the importance of environmental efficiency. Opportunities may exist for the department to support "greener" suppliers in an effort to present itself as a department that is committed to sustainable development.

3.11 Partnerships for Sustainable Development

Partnerships with government, business and other stakeholders are not always used effectively to encourage the innovation of policy instruments that further sustainable development goals. Partnerships will strengthen the government's capacity for environmental research and place greater emphasis on sustainable development in government decision making. The responsibility for the environment and sustainable development is a shared one across government. Federal departments can work together to more effectively and efficiently promote the goals of sustainable development.[1]

Our consultations with departmental staff indicate that the creation of stronger partnerships could encourage the innovation of policy instruments and environmentally friendly processes that further sustainable development goals (innovation objective). Partnerships can also be used to increase the connectedness of businesses and consumers across Canada (see related opportunity in Section 3.9.1 above), providing quick, easy and integrated access to major sources of sustainable development information (connectedness objective). Industry Canada's trade role is all about partnerships. Trade partnerships can also be used to encourage sustainable development (trade objective).

3.11.1 Innovation

Partnerships are an essential ingredient in Industry Canada's innovation strategy. There exist many opportunities for the department to partner with other departments, provincial governments, industry and community groups to facilitate the evolution of innovative, environmentally friendly technology. Industry Canada has had a long history of successful partnerships with other federal departments, including Environment Canada, Natural Resources Canada and Health Canada.

Partnering with other government departments: There is an opportunity to partner with other departments to promote awareness of sustainable development to the Canadian public at large through innovative partnerships. Together with other relevant departments (e.g. Environment Canada, Natural Resources Canada, Statistics Canada and the National Research Council) tools could be developed and promoted that help extend the knowledge base to firms and households. Tools should be easily accessible, and possibly interactive, to have the most benefit. In this respect the potential of programs such as SchoolNet, could be examined to determine how they might be used to deliver the SD message. Industry Canada has an opportunity to strengthen other government partnerships, such as with the Canadian Environmental Assessment Agency, particularly in the development of standards for environmental assessment. (Also see the related initiative with respect to environmental assessment guidelines discussed in Section 3.9.1).

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[1] *1999 Speech from the Throne.*

Partnering with industry: *Technology Partnerships Canada* (TPC), a special operating agency of Industry Canada, is a technology investment fund established to contribute to the achievement of Canada's objectives of increasing economic growth, creating jobs and wealth, and supporting sustainable development. TPC invests strategically in research, development and innovation in order to encourage private sector investment, and so maintain and grow the technology base and technological capabilities of Canadian industry. TPC will also encourage the development of SMEs in all regions of Canada.

TPC investments in environmental technologies involve projects in priority environmental areas such as the development of sustainable alternatives (better conservation of energy, water and non-renewable resources), pollution prevention through the development of clean process technologies (including clean car technologies), pollution abatement (technologies that reduce waste or harmful emissions) and pollution remediation.

3.11.2 Trade

Trade partnerships: *Trade Team Canada* works in partnership with Canadian industry to identify priority markets where the government will promote national trade interests. Internationally, the department is focusing on increasing the number of new exporters, diversifying markets and improving market share by key sectors. The department is also matching Canadian suppliers with foreign trade opportunities through the International Business Opportunities Centre. There are potentially opportunities for Industry Canada to continue to participate in multilateral initiatives with our trading partners.

4 Constraints

The constraints highlighted in this chapter of the report are based on the perceptions and opinions of Industry Canada officials interviewed as part of this study. It should be noted that some of the elements discussed may have already been addressed, or are in the process of being addressed by the department, in anticipation of the second phase of the Sustainable Development Strategy (SDS II).

4.1 Importance of Having a Balanced View of Constraints

For the purpose of this study, a "constraint" has been defined as a limiting factor that is perceived to have a significant impact on the potential for the department to advance sustainable development initiatives. The officials from Industry Canada who were interviewed for this study, recognize that the department is on a learning curve with regard to making sustainable development initiatives work successfully. Notwithstanding this, the mid-term evaluation study showed that a lot has been accomplished within the department since the inception of SDS I.

In fact, significant progress has been made on all the action items connected with SDS I. Four discrete action items were substantially completed during 1997-1998, and another five were completed during 1998-1999. Advancements have been made on each of the remaining on-going action items. The department expects to deliver its last three discrete action items by the end of the 1999-2000 fiscal year.

While the discussion of constraints may be misconstrued as negative by some, the reader is encouraged to take a balanced interpretation of these constraints, and to see them in the context of the department's SD accomplishments to date – and to interpret them as challenges to address during SDS II. The mid-term evaluation concluded that Industry Canada has come a long way in moving up the learning curve over the past three years, and that the department has taken concrete steps to advance its sustainable development agenda.

4.2 Awareness and Corporate Culture

There is a perception that there is not a clear understanding of the meaning of sustainable development throughout the department. Since sustainable development is a relatively recent concept it will take time for staff to fully understand sustainable development and how it can be effectively built into the department's agenda. Sustainable development is more than a buzzword. It is perceived as a concept and an approach to how we live our lives—a lifestyle change for industry, government and the public. There is a perception that sustainable development needs to be built into everyday language and effectively communicated through all branches of the department, in a consistent and clear fashion.

Currently, there appears to be a pervasive view that the department is not ready to think more aggressively in terms of sustainable development. There is some resistance to change resulting from "change fatigue" as well as resource and time constraints. These factors hinder the cultural change required to integrate sustainable development into the department's agenda. Moreover, with the sustainable development budget already largely committed and other cross cutting initiatives competing for priority within the department (e.g., bilingualism, equity), Industry Canada will need to continue finding creative means to deal with this challenge.

4.3 Leadership and Commitment

Conceptually, management is committed to sustainable development, but is perceived to have more latitude to further incorporate it into the departmental strategic planning process. For sustainable development to become a more successful initiative within the department, there is a view by some that senior management should more clearly articulate the link between sustainable development and the department's five strategic objectives. More visible leadership and commitment are perceived by some to be essential to bring about the cultural changes required to understand sustainable development. These cultural changes could be both top-down and bottom-up to make ownership of sustainable development more pervasive.

4.4 Limited Resources

Currently, there is a perception that there are few new incremental financial and human resources available to advance sustainable development initiatives within the department beyond the existing commitments in the first strategy. There are some staff dedicated—either partly or fully—to sustainable development projects, but many have other competing priorities. Faced with heavy workloads, employees' priorities are often dictated by their senior management. While there has been some incremental funding to commit to the delivery of sustainable development initiatives beyond the commitments in the sustainable development strategy these are often not recognized or perceived to be insufficient. Without appropriate resource allocations there may be resistance to new sustainable development initiatives. There is a view that Industry Canada should address how resources can best be allocated and fairly distributed across appropriate departmental branches in order to move the sustainable development agenda forward.

Also, in order for Industry Canada to strengthen its sustainable development performance measurement, SD resource allocation decisions should be considered.

4.5 Partnerships with Industry and Other Government Departments

There is a perception among the officials interviewed that the department could do more to develop a coordinated and integrated strategic approach to partner with industry and other departments in order to implement specific sustainable development initiatives.

Industry Canada is slowly moving up the learning curve in trying to deal with sustainable development issues. One of the reasons for this slow progression is related to the level of integration and partnerships with other federal departments. This is not to say that there are no strong partnerships existing between Industry Canada and other government departments, but there is definitely room for improvement. Within the department there are opportunities to promote greater awareness of the power of partnerships, their capabilities to bring about positive change, and their possible benefits for sustainable development.

Respondents in our interviews stated that the level of coordination and cooperation needed between departments to implement goals is not always present and that it often becomes easy to lose sight of the goals. Building relationships and working together with departments who share similar areas of responsibility (e.g., Environment Canada, Natural Resources Canada, and Department of Foreign Affairs and International Trade) can be a cost effective and strategic approach for delivering sustainable development initiatives. As stated by the Commissioner of the Environment and Sustainable Development, sustainable development is a pressing government issue that cuts across various departmental mandates and political jurisdictions and effective coordination across these mandates and jurisdictions is essential for meeting Canada's sustainable development objectives[1].

4.6 Performance Measurement as a Requirement for SD Initiatives

The consultation process with Industry Canada officers indicated that there is a perception that including performance measurement as a requirement within the scope of SD initiatives is a constraint. Nonetheless, recognizing that performance measurement is indeed part of the planning and evaluation process for government initiatives, Industry Canada commissioned an SD evaluation framework. The development of this draft evaluation framework is an initial step towards identifying appropriate performance measurement requirements for SDS I. Chapter 3 of this report identifies a further opportunity for the department to improve and develop SD related performance methodologies.

A related performance measurement constraint is the perception that the office of the Commissioner on Sustainable Development and Treasury Board are not providing federal departments adequate guidance regarding the development of SD performance indicators.

4.7 Planning Processes

The general perception of interviewees is that the department could do more to make sustainable development a high priority, and that there could be more integration of sustainable development into the decision-making processes of the department. This situation has limited the department's ability to realize the full potential of its first sustainable development strategy.

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[1] *Moving Up the Learning Curve, The Second Generation of Sustainable Development Strategies,* December, 1999, p.2.

The views expressed by Industry Canada officials are that the department could do a more effective job of integrating sustainable development with its corporate objectives. Sustainable development could be more explicitly linked with relevant programs and policies in order for Industry Canada to deliver on its mandate and provide service to its clients. Furthermore, the department could also integrate the views of external stakeholders, and other partners and clients, into the planning process where appropriate. In preparation for SDS II, Industry Canada could put more thought to sustainable development issues and integrate environmental considerations into relevant aspects of the planning and decision-making processes

4.8 Other Constraints

4.8.1 Lack of Awareness by Consumers and Public Interest Groups

According to some Industry Canada officials, there is limited awareness of and interest in sustainable development by consumers and public interest groups. Many people are more preoccupied with issues such as job security, health care and debt levels. Factors other than sustainable development may drive consumer behaviour. For example, consumers who purchase sport utility vehicles often do so because of the car's appearance or functionality and ignore the fact that these vehicles are high polluters. Even though Canadians are more acclimatized and conscious of recycling and waste production (e.g., using blue boxes), there is still very little emphasis on other sustainable development issues. Government has an opportunity to play more of a role in furthering public awareness and providing individuals with more information and explanations on the environmental debate, to increase the profile of sustainable development with consumers.

4.8.2 Selling Sustainable Development to SME's

Selling the idea of sustainable development to SMEs is challenging, because they frequently cannot justify the short-term expense of implementing good sustainable development practices in their companies. Many SMEs do not have the financial resources to take advantage of integrating environmental considerations into their business operations. Moreover, there is a perception that a corporate cultural change is needed to implement environmental management systems like the ISO 14000 series of voluntary standards. Given these constraints, the opportunity for Industry Canada is to raise the level of awareness of sustainable development issues with SMEs, and to provide them with information that is specific to their needs that will help them become more eco-efficient and profitable. There was a perception by some that it is important that businesses see the financial reward and impact of making sustainable development changes. There are opportunities for the department to repackage sustainable development in such a way that makes it more appealing to business and demonstrates the positive impacts resulting from sustainable development operations.

5 Conclusions and Recommendations

Industry Canada's next sustainable development strategy (SDS II) must be tabled in the House of Commons by December 2000. This strategy will build on the successful practices of SDS I and articulate how the department intends to implement sustainable development.

This internal issues scan is intended to help the department and the Commissioner of the Environment and Sustainable Development understand the implications of the department's activities for sustainable development.

5.1 Key Sustainable Development Issues

Nine sustainable development issues emerged from the consultation process with 46 staff members as key issues for the department. These issues, based on the general perceptions of the persons interviewed, are those that have been identified as significant from the standpoint of Industry Canada's mandate and strategic direction. These are issues that the department could address in SDS II. These issues are also consistent with the objectives identified in *A Guide to Green Government* and the recent *Speech from the Throne*.

1. **Efficient use of Canada's renewable resources:** The development of new technology holds promises of the introduction of more sustainable and less resource intensive production and extraction methods. As Canada becomes more connected and electronically oriented, there is an expectation in the longer term that the new economy will be less dependent on certain resources. The resource sector must remain viable, and in order for it to do so it needs to operate in a fair marketplace that opens up the maximum number of commercial opportunities.
2. **Management of toxic substances:** The management of toxic substances by industry should be sensitive to the public interest, while preserving companies' competitive position. Industry needs to decide how to manage and reduce such substances while ensuring a fair and efficient marketplace and while remaining competitive enough to attract investment. There should be a balance between the cost of reducing toxic substances and the goal of remaining viable and competitive.
3. **Pollution prevention and clean-up technologies:** In the long term, one key to pollution prevention is the innovation of clean production/process and pollution abatement technologies. Other opportunities exist, such as advancing eco-efficiency. In the short term, there are opportunities to promote awareness of pollution prevention, and work towards making pollution prevention compatible with Industry Canada's connectedness and marketplace strategic objectives.

4. **Greenhouse gas emissions and climate change technology**: The development of clean-production technologies will most effectively meet the challenge of reducing emissions. There are also opportunities to promote climate change technologies in the marketplace.

5. **Distribution of costs and benefits between generations:** The question of inter-generational equity is a key aspect of sustainable development. It is important that future generations are able to *benefit* environmentally, economically, and socially in the same way as the current generation. It is equally important that the *costs* of sustainable development are fairly distributed between generations. The notion of inter-generational equity is an all-encompassing issue for sustainable development, which is very relevant to the strategic direction of Industry Canada – especially given the department's commitment to economic growth through technological innovation and connectedness, an improved investment climate, and a fair and efficient marketplace.

6. **Improving productivity**: Innovative technology that is eco-efficient stands to help increase productivity while decreasing environmental inefficiency. A more harmonized marketplace should increase the availability of foreign developed technology that will provide opportunities for Canadian firms to be more competitive and productive. In the longer run, a more electronically oriented economy offers potential to advance sustainable development and improve technology.

7. **Integrating sustainable development into decision-making processes**: Industry Canada could find new and innovative ways to improve the recognition of sustainable development within the department so that it is integrated with management's decision making at all levels.

8. **Putting Industry Canada's own house in order:** The department should promote the value and impact of sustainable development through internal corporate stewardship initiatives before it can promote these issues externally to industry.

9. **Partnerships for sustainable development:** The creation of stronger partnerships will encourage the innovation of policy instruments and environmentally friendly productions that further sustainable development goals. Partnerships can also be used to increase the connectedness of businesses and consumers across Canada, providing quick, easy and integrated access to major sources of sustainable development information. Trade partnerships can be used to strengthen and encourage sustainable development.

5.2 Opportunities to Address Issues

A number of potential initiatives that could contribute to achieving government-wide sustainable development objectives, within a context consistent with Industry Canada's mandate, were identified based on the perceptions of the Industry Canada officials that were interviewed. These perceived opportunities are listed below under each of Industry Canada's strategic objectives. Full narratives of each issue and related opportunity were presented in Chapter 3 of this report.

1. **Innovation:** biotechnology; technology roadmaps; cleaner production and disposal; eco-efficiency; eco-effectiveness; developing and showcasing technology; technology migration strategies; roundtable outreach initiative; R&D program opportunities; productivity through eco-efficiency; partnering with other government departments; partnering with industry.
2. **Connectedness:** e-commerce; pollution prevention Web site; linking e-commerce to productivity and sustainable development; environment solutions database;
3. **Marketplace:** promoting and supporting industry action on toxic substances; best practices and voluntary standards; environmental management systems for SMEs; information dissemination.
4. **Investment:** increasing competitiveness through investment.
5. **Trade:** sustainable trade; trade opportunities; trade partnerships.
6. **Corporate and Management Services:** increased use of decision-making tools; enhanced performance measurement process; improving the environmental assessment process; increasing sensitivity to intergenerational equity issues; integrating SD into corporate planning and strategic documents of the department; use of Industry Canada Internet Web site in decision-making process; greening of operations; fleet management; building management; and procurement practices.

The results of this issues scan suggest that some of the department's strategic objectives are perceived as offering more opportunity to advance sustainable development than do others. The **innovation** and **marketplace** objectives are perceived to be the most significant in the medium term and the **connectedness** objective appears to have a significant potential in the longer term. The **stewardship and management** objective is considered to be necessary to support the initiatives of the strategic objectives.

While the issues identified in the scan are linked to each of the five general sustainable development objectives in the *Guide to Green Government*, the key opportunities appear to be most strongly aligned with the following two *Guide* objectives: sustaining or natural resources: sustainable jobs, communities and industries; and improving our quality of life and well being.

5.3 Constraints

The key factors identified through the interview process that are perceived to be constraints to advancing sustainable development within Industry Canada include the following:

- awareness and corporate culture;
- leadership and commitment;
- resources;
- partnerships with industry and other government departments;
- performance measurement, and
- planning processes.

There is some consensus among those that were interviewed that a first step for addressing the constraints that relate to the above listed areas, requires that senior management be more visible in its commitment to the SD agenda. A strong commitment by senior management is perceived as necessary for strengthening the credibility of SDS II within the department.

5.4 Recommendations

The following recommendations are made for Industry Canada to continue to improve the quality and scope of the SD strategy and to turn sustainable development into concrete actions.

- **Focus on the nine SD issues identified in this report:** These issues have been identified by the departmental representatives that were interviewed as key issues that should be addressed by Industry Canada. Focusing on these specific issues will provide a more strategic approach for SDS II, and will enable the department to undertake SD-related initiatives in a more direct and clear way.
- **Consider the opportunities identified:** It is recommended that the department focus on these opportunities and use them to develop concrete sustainable development initiatives that are relevant and consistent with Industry Canada's mandate and SD priorities, and with government-wide SD objectives.
- **Merge results of this *internal* issues scan with other studies:** This *internal* issues scan summarizes key issues and opportunities identified through interviews with 46 professional and management officials from a cross-section of branches within Industry Canada. Views of stakeholders and clients of Industry Canada's programs and policies, particularly those gathered as part of the *external* issues scan study, and views of officials from other government departments, will need to be merged with the results of this study. In addition, the findings and lessons learned that are presented in the mid-term evaluation study of SDS I need to be considered in developing SDS II. These merged results can then be used as a basis for further consultation with stakeholders and other internal departmental officials.

- **Recognize the constraints:** The department should recognize the constraints identified in this report when developing SDS II. Considering these constraints in the planning process for SDS II could help prioritize the initiatives and to serve as a "reality check" on what is potentially achievable within the parameters defined by these constraints.

This report was essentially based on a self-assessment by Industry Canada officials and reflects their perceptions of the relevance of SD-related initiatives to the department. The findings of this study should be seen as only a step in a continuous improvement process towards "getting it right", and for developing the next sustainable development strategy.

Appendix A

References

1. *A Guide to Green Government*, 1995.
2. Extract from the *1999 Speech from the Throne: The Quality of our Environment*.
3. Industry Canada: *Sustainable Development Strategy 1997.*
4. Industry Canada: *Making a Difference—Our Priorities for 1999-2000.*
5. Industry Canada: *1999-2000 Estimates—Report on Plans and Priorities.*
6. Department of National Defence: *Environmentally Sustainable Defence Activities—A Sustainable Development Strategy for National Defence,* December 1997.
7. *Report of the Commissioner of the Environment and Sustainable Development to the House of Commons,* 1999.
8. *Moving Up the Learning Curve: The Second Generation of Sustainable Development Strategies.* Report from Brian Emmett, Commissioner of the Environment and Sustainable Development, December 1999.

Appendix B

List of Persons Interviewed

Heather Amys, Team Leader, Environmental Affairs, Environmental Affairs Branch toxics policy

John Arseneau, Senior Director and Associate Manager, Environmental Affairs Branch

Jerry Beausoleil, Director General, Industry and Science Policy

Lucien Bradet, Director General and Manager, Environmental Affairs Branch on information products, environmental technology and trade

Darius Breau, Manager, Operational Policies, Spectrum, Information Technologies and Telecommunications

Nancy Bresolin, Director and Manager, Forestry Products

Angela Briginshaw, Director, Regulatory Policy and Planning, Spectrum, Information Technologies and Telecommunications

Ewa Burk, Director Environment Technologies, Technology Partnerships Canada

Glen Campbell, Chief, Strategic Planning, Spectrum, Information Technologies and Telecommunications

Heather Campbell, Analyst, Environmental Technologies Directorate, Technology Partnerships Canada

Peter Chau, Senior Marketplace and Sustainable Development Officer, Coordination and Management Services Branch

John Chibuk, Chief, Sustainable Development, Industry and Science Policy

Serge Croteau, Director General, Programs Services Environmental assessment and Industry Canada as an RA

John Dauvergne, Team Leader, Sustainable Development, Environmental Affairs Branch—Sustainable Development and Climate Change Policy

Dennis DeMelto, Director General and Manager, Services Industry and Capital Projects

Rick Domokos, Director, Business Intelligence and Emerging Sectors, Spectrum, Information Technologies and Telecommunications

Howard Dudley, Director, Facilities Management, Trade and Operations Branch

Chuck Ethier, Director General and Manager, Minerals and Metals

Philip Fleming, Team Coordinator, Climate Change Team, Environmental Affairs Branch—Sustainable Development and Climate Change Policy

Suzanne Fortin, Officer, Environmental Affairs, Environmental Affairs Branch toxics policy

Lee Gill, Director, Industry and Science Policy

Martin Green, Director, Industry and Science Policy

Nancy Hamzawi, Information Products Officer, Environmental Affairs Branch on information products, environmental technology and trade

Jamie Hum, Director, Software and Services, Spectrum, Information Technologies and Telecommunications

Thierry Husson, Senior Advisor, Industry Framework Policy, Spectrum, Information Technologies and Telecommunications

John Jaworski, Senior Officer, Biotechnology

Michael Jenkin, Director General, Office of Consumer Affairs

Wai Fai Lee, Team Leader, Information Products, Environmental Affairs Branch

Alan MacGillivray, A/Director, Industry Framework Policy, Spectrum, Information Technologies and Telecommunications

John Margeson, Industry Officer, Industrial and Consumer Products, Advanced Materials and Plastics

Bob McCaughern, Director General, Spectrum Engineering Branch, Spectrum, Information Technologies and Telecommunications

John Mihalus, A/Director General and Manager, Chemicals

Sherrill Minns, Director, Corporate Planning and Performance Co-ordination Directorate, Corporate Comptroller

Glyn Moore, Evaluation Manager, Audit and Evaluation Branch

Christine Nymark, Director General, Life Sciences Biotechnology

Richard Pageau, Director General, Trade and Operations Branch

Someshwar Rao, Director, Industry and Science Policy

Robert Renaud, Manager, Program Integrity and Secretariat, Environmental assessment and Industry Canada as an RA

Joanna Rosborough, Senior Industry Officer, Forestry Products

Victoria Rowbotham Director, Consumer Research and Analysis, Office of Consumer Affairs

Larry Shaw, A/Director General, Industry and Science Policy

Richard Slowikowski, Senior Analyst, Industry and Science Policy

Don Stewart, Officer, Environmental Affairs Branch—Sustainable Development and Climate Change Policy

Tony Stone, Officer, Industrial and Consumer Products

Val Traversy, Director General and Manager, Manufacturing and Processing Technologies

Emmy Verdun, Director General, Coordinator and Management Services

Tom Wright, Director General, Automotive and Transportation, Trade/Auto

Appendix C

Interview Guide and Issues Prompt Sheet

Industry Canada – Sustainable Development Strategy
Internal Issues Scan

Industry Canada has commissioned KPMG Consulting to undertake an assessment of the department's policies, programs and operations in terms of their impact on sustainable development. This study involves identifying the key sustainable development issues from a departmental standpoint and a mid-term evaluation of the department's performance. To assist with this study, several departmental managers and officers are being surveyed.

The World Commission on Environment and Development (the Brundtland Commission) defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". This definition has been integrated into Canadian federal legislation. The Government of Canada is committed to sustainable development as a way to improve our quality of life and consequently, federal departments are required to produce sustainable development strategies every three years. These strategies must outline concrete goals and action plans for integrating sustainable development into departments' policies, programs and operations. Industry Canada's first Sustainable Development Strategy (SDS I), was developed in 1997. The second, SDS II, is expected to be completed by December 2000.

The attached interview questions and list of sustainable development issues provide the background for each interview. The issue list is based on material provided in *A Guide to Green Government* (the framework used to guide and assist federal departments in the preparation of their sustainable development strategies) and the recent *Speech from the Throne*. Please review the issues list and questions before/during the interview.

Results of the interviews we are conducting will be used to develop an Issues Scan report for SDS II and to develop a mid-term evaluation of SDS I. **Your responses will be helpful in planning future programs/strategies for sustainable development initiatives of Industry Canada. However, your participation is voluntary. The interview takes approximately 60 minutes to complete. All information you provide will only be reported in aggregate form and will not be associated with your name in our reports.**

Interview Questions

For each sustainable development issue listed in the attached document, please answer the following questions:

1. Given the list of sustainable development issues provided, which issues do you consider most relevant for Industry Canada? *[see attached list of issues]* Please explain why.
2. Where does this issue fit in with Industry Canada's Strategic Objectives (i.e., Innovation, Connectedness, Marketplace, Investment, and Trade)? *[see one-page hand-out on Industry Canada's five Strategic Objectives].*
3. If this sustainable development issue is deemed relevant to Industry Canada, which departmental programs, policy initiatives and/or operations can help address the issue? Please be specific to those programs, policies or operations with which you are involved or for which you are responsible.

   Examples of relevant programs, policies and operations include:

   - *Programs: Community Access Program, consumer awareness programs, Canadian Environmental Industry Strategy, etc.*
   - *Policy initiatives: innovation policies, trade policies (re Team Canada International Business Development Strategy), federal climate change policy.*
   - *Operations: outsourcing, procurement, partnerships, Environmental Management System, etc.*
4. What opportunities exist within these programs, policies and operations for contributing to a resolution of this sustainable development issue? In other words, what realistically can be done within the mandate and strategic framework of your department to address this sustainable development issue?
5. Are there any constraints that may impede the department from addressing this sustainable development issue? What are these constraints?
6. To what extent can this sustainable development issue be addressed in SDS II? In your opinion, what sustainable development strategies are achievable for SDS II?
7. Are there other sustainable development issues which have not been identified that Industry Canada should consider?

Your responses will be helpful in planning future programs/strategies for sustainable development initiatives of Industry Canada. However, your participation is voluntary. The interview takes approximately 60 minutes to complete. All information you provide will only be reported in aggregate form and will not be associated with your name in our reports.

Sustainable Development Issues Prompt Sheet

Based on *A Guide to Green Government* (GG), the *Speech from the Throne* (TS) and Industry Canada's *Sustainable Development Strategy* (SDS).

I. Sustaining our Natural Resources – Sustainable Jobs, Communities and Industries

A. Unsustainable renewable resource practices – Many of Canada's resources are renewable, but for resource bases to be sustainable they must have the capacity to regenerate; the integrity of ecosystems on which a resource depends should be respected. (GG, p. 5)

B. Inefficient use of non-renewable resources – Some resources (minerals, oil, gas and coal) are not renewable. Sustainable development issues include efficient extraction and manufacturing processes of these resources. (GG, p.6)

II. Protecting the Health of Canadians and of Ecosystems

A. **Anthropogenic, persistent, bioaccumulative, toxic substances** – Toxic and anthropogenic (human-made) substances have long-term health and environmental implications, particularly when they accumulate in plant and animal tissues and thus persist in the environment. Canada needs to figure out how to manage these toxic substances most effectively. (GG, p. 6; TS, p. 11)

B. **Inadequate pollution prevention** – Pollutants (atmospheric, chemical, etc…) damage the environment, often in immeasurable ways. More than how to manage the consequences of pollution, the issue in Canada is how to prevent pollution and waste. Furthermore, Canadian pollution standards are sometimes inadequate or not properly enforced. (GG, p. 6; TS, p. 11)

C. Unprotected represented areas of ecosystems – The protected spaces that house many forms of plant and animal life, and which are important indicators of overall ecosystem health, need to be preserved. (GG, p. 6)

D. **Vulnerability to disasters (natural and human error)** – Natural disasters like landslides, tornadoes, forest fires, severe wind and hailstorms, floods and avalanches can have devastating social and economic costs. Human error or accident can also cause disasters, e.g. oil spills, nuclear waste, with devastating effects. In this case, the issue is how to clean up contaminated sites most effectively. (GG, p. 7; TS, p. 11)

III. Meeting Our International Challenges

A. **Ozone layer depletion** – The depletion of the ozone layer has human health, environmental and economic implications. (GG, p. 7)

B. **Greenhouse gas emissions and climate change** – Current projections indicate that with no further action Canada's emissions in the year 2000 will be 13 percent higher than in 1990. (GG, p. 8; TS, p. 10)

C. **Loss of biodiversity** – Biodiversity – the variety, richness and complexity of life that exists within nature – is increasingly threatened. In particular, some human activity is resulting in a loss of biodiversity. Certain species are particularly at risk, raising issues about how best to protect them and their natural environments. (GG, p. 8; TS, p. 11)

IV. Promoting Equity

A. **Unfair distribution of costs and benefits between generations** – While it is not possible to predict with precision the likely interests of future generations, future generations must benefit from the environment to the same degree as current generations. (GG, p. 8)

B. **Unfair distribution of current costs and benefits of SD (at home)** – Canada needs to figure out how to extend the benefits of the country's economic prosperity and high quality of life to as broad a segment of the population as possible without threatening the integrity of the nation's ecosystems. (GG, p. 8)

C. **Unfair distribution of current costs and benefits of SD (abroad)** – How can wealth be distributed more equitably between the nations of North and South? Inequitable distribution of wealth is a major barrier to achieving sustainable development. Furthermore, an insufficient provision of technical assistance to developing countries is hindering these countries' ability to respect sustainable practices. (GG, p. 9; TS, p. 11)

V. Improving our Quality of Life and Well-being

A. **Loss in productivity due to environmental inefficiency** – Environmental efficiency is an important dimension of productivity. How can Canada produce more with less – less resource inputs, less waste? In essence, Canada needs an improved understanding of the environmental costs and benefits and environmental inefficiency. (GG, p. 9; SDS1, p. 5)

B. **Inadequate innovation towards SD** – Canada needs policies and programs that help make measurable progress on a range of SD issues, but that also stimulate innovation and competitiveness. Part of the problem is an inadequate government capacity for and commitment to environmental research, and the need to base environmental objectives on sound, risk-based scientific analysis. (GG, p. 9; TS, p. 1; SDS1, p. 10)

C. **Inadequate measures of SD progress and regular reporting** – Canadians need access to information on sustainable development issues in order to assess, predict and respond to sustainable development challenges. (GG, p. 10)

VI. Other Sustainable Development Issues

A. **Lack of integrated processes** – Efforts are not always made to integrate sustainable development into decision making, skills building and tool improvement. The use of sound scientific analysis and policy tools needs to be integrated into the business planning and decision-making processes of government. (TS, p. 10)

B. **Putting the house in order** – If Industry Canada does not implement and follow procedures that encourage sustainable development, how can the department promote SD to the country at large? (TS, p. 11)

C. **Insufficient/Inadequate partnerships** – Partnerships with government, business and other stakeholders are not always used effectively to encourage the innovation of policy instruments that further sustainable development goals. (TS, p. 10)